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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,347	08/24/2006	**Xiangdong Li**	F506	2902

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COLLEN IP
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EXAMINER	
CHANG, JEFFREY HAO-WEI	
ART UNIT	**PAPER NUMBER**
4177	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/598,347	LI ET AL.	
	Examiner	Art Unit	
	JEFFREY H. CHANG	4177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *25 April 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: The term --This application is a 371 of PCT/CN/00220, filed February 24, 2005 which claims the foreign priority of Chinese Application Serial No. 200410021933.5 ,filed on 2/28/2004, which are hereby incorporated by reference.-- should be recited on Pg. 1, after the title, so as to update the status. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 2 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, the phrases "and/or" renders the claim indefinite because it is an alternate expression and is subject to more than one interpretation.

Regarding claim 5, the recitation of the "storage medium is connected with the second microprocessor of the portable image recording device (100B) through **the socket by the bus**" (emphasis added) is unclear and confusing. It is unclear as to what is the meaning of "the socket by the bus".

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al (US Pub. No. 2003/0020810 A1) in view of Iddan (US Pub. No. 2004/0254455 A1) and Glukhovsky et al (US Pub. No. 2003/0043263 A1).

Regarding claim 1, Figs. 1-4B of Takizawa et al disclose a medical wireless capsule-type endoscope system comprising a wireless endoscope capsule (3) and a portable image recording device (i.e. external unit 4); the wireless endoscope capsule includes a housing (i.e. capsule frame body 11), an optical front cover (i.e. hemisphere transparent member 12) connected to the housing, an LED array (15) arranged within the housing in sequence (see lines 5-8 of [0048]), a lens (16) and a power switch module (not disclosed); characterized in that, the wireless endoscope capsule further includes an image sensor (17), the first microprocessor (i.e. control/processing 25) for transforming the image information into a compressed JPEG format (not disclosed), the first RF transceiver module (i.e. send/receive 28) and a transceiver antenna (21), wherein the signal output of the image sensor is connected with the I/O port of the first microprocessor (see Fig. 4A where image sensor 17 is connected to first microprocessor 25), the image information received is transformed into the compressed JPEG format (not disclosed) by the first microprocessor and then sent to the data receiving terminal of the first RF transceiver module (see Fig. 4A where image data from image processing 27 is sent to first transceiver 25), the information is sent to the portable image recording device via the antenna by the first RF transceiver module (see [0057]) after the control commands received from the image recording device by the antenna are sent by the first RF transceiver module to the first microprocessor for processing (see [0066]), the operating modes of the LED array, the image sensor and the first RF transceiver module are controlled by the I/O ports of the first microprocessor (see Fig. 4A where

first microprocessor 25 is connected to and controls LED Drive 24, CMOS Driver 26, and Send/Receive 28); the portable image recording device (i.e. external unit 4) includes a transceiver antenna array (i.e. antenna 31), the second RF transceiver module (i.e. send/receive 33) the second microprocessor (i.e. control 35) and a storage unit (i.e. memory 34) connected with the bus thereof (see Fig. 4B where transceiver 33, microprocessor 35, and storage unit 34 are interconnected), wherein the second RF transceiver module (33) communicates the information received from the wireless endoscope capsule by the antenna array (31) to the second microprocessor (35) by the bus (see Fig. 4B where data from capsule moves from antenna array 31 to transceiver 33 to second microprocessor 35) or sends the information from the control terminals of the second microprocessor to the wireless endoscope capsule by the antenna array (see [0066]). It is noted that Takizawa et al does not specifically disclose a power switch module and JPEG image compression as required. However, Iddan discloses a power switch module (200), and Glukhovsky et al discloses JPEG image compression (see lines 1-5 of [0025]). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the system of Takizawa et al with the features of the power switch module and the JPEG image compression as taught by Iddan and Glukhovsky et al, as both Takizawa et al, and Iddan and Glukhovsky et al are directed to the capsule endoscope system. The motivation to combine the power switch module taught by Iddan with the capsule endoscope taught by Takizawa et al is that the power switch module turns the capsule endoscope on or off to save energy and prolong capsule battery life (see Iddan [0033]), and the motivation to combine the JPEG image compression feature taught by Glukhovsky et al with the capsule

endoscope taught by Takizawa et al is that JPEG image compression is a popular, old, and well known image compression technique (see Glukhovsky et al: lines 1-5 of [0025] and [0037]).

Regarding claim 2, it is noted that Takizawa et al does not specifically disclose a temperature and/or pressure sensor as required. However, Glukhovsky et al discloses that a temperature sensor and/or a pressure sensor are mounted within the housing of the wireless endoscope capsule (see lines 10-15 of [0010] where the pH sensor 22 of Takizawa et al may be replaced by temperature and pressure sensors as described in Glukhovsky et al), wherein the pressure sensor is closely mounted on the inner wall of the housing (pressure sensors must be closely mounted on the inner wall of the housing in order to measure external pressure), and the outputs of the temperature sensor and the pressure sensor are connected to the I/O ports of the first microprocessor (see Fig. 4A of Takizawa et al where the sensor 22 is connected to first microprocessor 25). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takizawa et al with the features of the temperature and/or pressure sensor as taught by Glukhovsky et al, as both Takizawa et al and Glukhovsky et al are directed to the capsule endoscope system. The motivation to combine pressure sensing and temperature sensing taught by Glukhovsky et al with the capsule endoscope taught by Takizawa is that temperature, pressure, and pH sensing are all common uses of capsule endoscopes and the pH sensor of Takizawa could easily be substituted by pressure or temperature sensors of Glukhovsky et al (see e.g. lines 10-15 of [0010]).

Regarding claim 3, Takizawa et al discloses that a wireless terminal (i.e. external unit attaching portion 5) connected with the computerized medical image workstation (i.e. personal computer body 38); the information from the control terminals of the second microprocessor (35)

of the portable image recording device (4) is sent to the wireless terminal (5) of the computerized medical image workstation by the second RF transceiver module of the portable image recording device (see Fig. 4B where the information is transferred from second microprocessor 35 through connector 36 to wireless terminal 5), and the information received from the wireless terminal of the computerized medical image workstation by the antenna array is sent by the wireless transceiver module of the portable image recording device to the second microprocessor by the bus for processing (see Fig. 4B and [0070] where information is sent from medical image workstation 38 through connector 36 and to second microprocessor 35), and then sent to wireless endoscope capsule (see Fig. 4A-B and [0070] where both capsule 3 and portable image recording device 4 have send/receive units which means that they are both capable of bidirectional communication). It is the Examiner's position that the claim limitations set forth don't require information to be communicated wirelessly between the portable image recording device and medical image workstation. The capsule endoscope system of Takizawa et al, for example, uses wired communication between the portable image recording device and medical image workstation. However, Glukhovsky et al discloses that the portable image recording device and medical image workstation may be separate devices, requiring the communication to be wireless (see Fig. 1 and lines 14-21 of [0015] where portable image recording device 12 is separate from medical image workstation 14, 18). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the system of Takizawa et al with the feature of the wireless communication system as taught by Glukhovsky et al, as both Takizawa et al and Glukhovsky et al are directed to the capsule endoscope system. The

motivation to combine is that wireless communication between the portable image recording device and medical image workstation would make the system more portable.

Regarding claim 5, as best understood, Fig. 4B of Takizawa et al discloses that a storage medium reader (i.e. connector 37) wiredly connected with the computerized medical image workstation (i.e. personal computer body 38) and a storage medium (i.e. memory 34), and the storage medium is connected with the second microprocessor (i.e. control 35) of the portable image recording device through the socket by the bus (see Fig. 4B where storage medium 34 is connected to second microprocessor 35).

Regarding claim 6, it is noted that Takizawa et al does not specifically disclose that the switch is a magnetically controlled switch as required. However, Iddan discloses that the power switch module (200) is magnetic switch module and the magnetically controlled switch of the magnetic switch module is switched on in the magnetic field, and after the magnet is removed, it is switched off (see [0033]). It is noted that although Iddan discloses a normally closed switch that opens (turns off) in the presence of a magnetic field, a normally open switch that closes (turns on) in the presence of a magnetic field could easily be substituted for the normally closed switch. Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the system of Takizawa et al with the feature of the as taught by Iddan, as both Takizawa et al and Iddan are directed to the capsule endoscope system. The motivation to combine the power switch module taught by Iddan with the capsule endoscope taught by Takizawa et al is that the power switch module turns the capsule endoscope on or off to save energy and prolong capsule battery life (see Iddan [0033]).

7. Claims 4 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takizawa et al (US Pub. No. 2003/0020810 A1) in view of Iddan (US Pub. No. 2004/0254455 A1) and Glukhovsky et al (US Pub. No. 2003/0043263 A1) and further in view of Krill (US Pub. No. 2004/0122315 A1) and Kallio (US Pub. No. 2002/0147008 A1).

Regarding claims 4 and 7, it is noted that the teachings of Takizawa et al, Iddan and Glukhovsky et al do not specifically disclose the use of GPRS (as per claim 4), or CDMA, GSM, or WLAN (as per claim 7) networks as required. However, Fig. 4 of Krill discloses that the portable image recording device (i.e. transceiver 20) and medical image workstation (i.e. remote medical monitoring station 30) communicate via cellular network (see [0033]); and Kallio discloses that common cellular networks include GPRS, CDMA, GSM, and WLAN (see [0023]) is old and well known. Thus, Krill in view of Kallio discloses that the system also includes a GPRS, CDMA, GSM or WLAN terminal (Kallio: [0023] where communication via GPRS, CDMA, GSM, or WLAN networks inherently require GPRS, CDMA, GSM, or WLAN terminals, i.e. cellular radio towers) and a wireless terminal connected with the computerized medical image workstation (i.e. remote medical monitoring station 30; Fig. 4 of Krill), the portable image recording device (i.e. transceiver 20; Fig. 4 of Krill) exchanges data with the GPRS, CDMA, GSM or WLAN terminal, and the GPRS or CDMA, GSM or WLAN terminal exchanges data with wireless terminal of the computerized medical image workstation through GPRS or CDMA, GSM or WLAN mobile networks (see Fig. 4 and [0033] of Krill where portable image recording device 20 and medical image workstation 30 communicate via cellular network, i.e. GPRS, CDMA, GSM, and WLAN). Hence, it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the system of

Takizawa et al, Iddan and Glukhovsky et al with the features of the use of GPRS, or CDMA, GSM, or WLAN networks as taught by Krill and Kallio, as both Takizawa et al, Iddan, Glukhovsky et al, and Krill and Kallio are directed to the capsule endoscope system. The motivation to combine the specific GPRS, CDMA, GSM, and WLAN networks taught by Kallio with the capsule endoscope system taught by Krill is that GPRS, CDMA, GSM, and WLAN are common types of cellular networks (Kallio: [0023]). Further, it would also have been obvious to one having ordinary skill in the art at the time the invention was made to combine the capsule endoscope system using cellular network as taught by Krill in view of Kallio with the wireless capsule endoscope system as taught by Takizawa et al in view of Glukhovsky et al and Iddan, as both groups are directed to capsule endoscope systems. The motivation to combine is that cellular networks may be used to facilitate communication between the portable recording device and medical image workstation (see Krill: [0033]).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Meron et al (US Pub. No. 2002/0171669 A1) discloses a capsule endoscope system with capsule endoscope, portable image recording device, and a medical image workstation.

Madar et al (US Pub. No. 2004/0092825 A1) discloses a capsule endoscope system that uses multiple networks to communicate between devices.

Matsumoto et al (US Pub. No. 2003/0158503 A1) discloses a capsule endoscope system that suggests that the portable image recording device and medical image workstation may communicate wirelessly.

Yokoi et al (US Pub. No. 2003/0023150 A1) discloses a capsule endoscope system that uses cellular networks as communication means.

Fujita et al (US Pub. No. 2007/0268280 A1) discloses a capsule endoscope system with a portable recording medium that can be physically transferred between the portable image recording device and medical image workstation.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY H. CHANG whose telephone number is (571)270-5336. The examiner can normally be reached on Monday - Thursday, 8:00 am - 5:00 pm, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joe Cheng can be reached on 571-272-4433. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. H. C./
Examiner, Art Unit 4177
12/10/09

/Joe H Cheng/
Supervisory Patent Examiner
Art Unit 4177